

PROJECTION DEVICE USING LIQUID CRYSTAL DISPLAY

Publication number: JP63103209

Publication date: 1988-05-07

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Classification:

- international: **G02F1/1335; G02F1/133; G03B21/00; G09F9/00; G02F1/13; G03B21/00; G09F9/00; (IPC1-7): G02F1/133; G03B21/00; G09F9/00**

- European:

Application number: JP19860249139 19861020

Priority number(s): JP19860249139 19861020

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Abstract of **JP63103209**

PURPOSE: To prevent the quantity of light from decreasing owing to the passage of a deflecting plate and to make a high-contrast, bright image display by using a thin metallic film as a deflecting and reflecting plate and arranging an analyzer on a projection reflection mirror provided on the optical path of reflected light from a liquid crystal element. **CONSTITUTION:** Light emitted by an OHP optical system 35 is passed through the analyzer 11 and a liquid crystal cell 13, reflected by a polarizing and reflecting plate 17, and passed through the liquid crystal cell 13 and analyzer 11 again, so that the light is projected from the OHP optical system 35. At this time, the polarizing and reflecting plate 17 made of the thin metallic film operates as a polarizing plate, i.e. a polarizer, so the light is passed through the analyzer 11 selectively according to whether or not the polarizing plane of is rotated by the liquid crystal cell 13 and projected from the OHP optical system 35. Thus, the polarizing and reflecting plate 17 functions as a polarizing plate and a reflecting plate. The light incident on a liquid crystal display element from the OHP optical system 35 is passed through the analyzer 11 twice, but it is reflected by the polarizing and reflecting plate 17 only once, so a decrease in the quantity of projection light is precluded accordingly and a bright image display is made.

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